TPF/Darwin **Invited Talk**
Evolution of Stars and Habitability - 2

Abstract

 # 392

Searching for Extraterrestrial Intelligence

Jill Tarter (tarter at seti.org), SETI Institute

In his book "Many Worlds", Steven J. Dick has chronicled the millennia of discourse about other inhabited worlds, based upon deeply held religious or philosophical belief systems. The popularity of the idea of extraterrestrial life has waxed and waned and, at its nadir, put proponents at mortal risk. The several generations of scientists now attending this meeting at the beginning of the 21st century have a marvelous opportunity to shed light on this old question of habitable worlds through observation, experimentation, and interpretation, without recourse to belief systems and without risking their lives (though some may experience rather bumpy career paths). We are dealing with the big picture questions: "Where did we come from?" and "Are we alone?" These are questions that the general public understand and support, and these are questions that are attracting students of all ages to science and engineering programs. These questions also push the limits of instrumentation to explore the cosmos remotely across space and time, as well as to examine samples of interplanetary space returned to the laboratory and samples of distant time teased out of our own Earth. In theory, the potentially habitable real estate beyond Earth has recently been greatly expanded and within the next few decades it may be possible to detect the biosignatures or technosignatures of inhabitants on distant worlds, should there be any. This talk will focus on the techniques and tools of SETI; techniques that seek out mathematicians (or the machines designed by them) rather than microbes.